DOCUMENT RESUME

ED 384 015 CS 012 179

AUTHOR Pressley, Michael; And Others
TITLE A Survey of Instructional Practices of Primary Teachers Nominated as Effective in Promoting Literacy. Reading Research Report No. 41. Summer 1995.
INSTITUTION National Reading Research Center, Athens, GA.; National Reading Research Center, College Park, MD.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE 95
CONTRACT 117A20007
NOTE 36p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Classroom Environment; *Elementary School Teachers; Instructional Effectiveness; *Primary Education; Reading Instruction; Reading Research; Student Evaluation; *Teacher Attitudes; *Teacher Behavior; *Teaching Methods; Writing Instruction; Writing Research

ABSTRACT

Primary teachers who were nominated by their supervisors as effective in educating their students to be readers and writers responded to two questionnaires about their practice. Subjects were 23 kindergarten, 34 first-grade, and 26 second-grade teachers. As expected, there were shifts in reported practices between kindergarten and grade 2, although there was much more similarity than difference in the reports of kindergarten, grade-1, and grade-2 teachers. The teachers claimed commitments to: (1) qualitatively similar instruction for students of all abilities, along with additional support for weak readers; (2) literate classroom environments; (3) modeling and teaching of both lower-order (e.g. decoding) skills and higher-order (e.g. comprehension) processes; (4) extensive and diverse types of reading by students; (5) teaching students to plan, draft, and revise as part of writing; (6) engaging literacy instruction (i.e., instruction motivating literate activities); and (7) monitoring of students' progress in literacy. (Contains 73 references and three tables of data.) (Author/RS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 384 015

A Survey of Instructional Practices of Primary Teachers Nominated as Effective in Promoting Literacy

Michael Pressley
State University of New York at Albany

Joan Rankin
University of Nebraska

Linda Yokoi
State University of New York at Albany

CS012179

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☒ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

NRRC
National Reading Research Center

READING RESEARCH REPORT NO. 41
Summer 1995

BEST COPY AVAILABLE

NRRC

National Reading Research Center

A Survey of Instructional Practices of Primary Teachers Nominated as Effective in Promoting Literacy

Michael Pressley
State University of New York at Albany

Joan Rankin
University of Nebraska

Linda Yokoi
State University of New York at Albany

READING RESEARCH REPORT NO. 41
Summer 1995

The work reported herein is a National Reading Research Project of the University of Georgia and University of Maryland. It was supported under the Educational Research and Development Centers Program (PR/AWARD NO. 117A20007) as administered by the Office of Educational Research and Improvement, U.S. Department of Education. The findings and opinions expressed here do not necessarily reflect the position or policies of the National Reading Research Center, the Office of Educational Research and Improvement, or the U.S. Department of Education.

NRRC National Reading Research Center

Executive Committee
Donna E. Alvermann, Co-Director
University of Georgia
John T. Guthrie, Co-Director
University of Maryland College Park
James F. Baumann, Associate Director
University of Georgia
Patricia S. Koskinen, Associate Director
University of Maryland College Park
Nancy B. Mizelle, Acting Associate Director
University of Georgia
Jamie Lynn Metsala, Interim Associate Director
University of Maryland College Park
Penny Oldfather
University of Georgia
John F. O'Flahavan
University of Maryland College Park
James V. Hoffman
University of Texas at Austin
Cynthia R. Hynd
University of Georgia
Robert Serpell
University of Maryland Baltimore County
Betty Shockley
Clarke County School District, Athens, Georgia
Linda DeGroff
University of Georgia

Publications Editors

Research Reports and Perspectives
Linda DeGroff, Editor
University of Georgia
James V. Hoffman, Associate Editor
University of Texas at Austin
Mariam Jean Dreher, Associate Editor
University of Maryland College Park
Instructional Resources
Lee Galda, *University of Georgia*
Research Highlights
William G. Holliday
University of Maryland College Park
Policy Briefs
James V. Hoffman
University of Texas at Austin
Videos
Shawn M. Glynn, *University of Georgia*

NRRC Staff
Barbara F. Howard, Office Manager
Kathy B. Davis, Senior Secretary
University of Georgia

Barbara A. Neitzey, Administrative Assistant
Valerie Tyra, Accountant
University of Maryland College Park

National Advisory Board
Phyllis W. Aldrich
Saratoga Warren Board of Cooperative Educational Services, Saratoga Springs, New York
Arthur N. Applebee
State University of New York, Albany
Ronald S. Brandt
Association for Supervision and Curriculum Development
Marshá T. DeLain
Delaware Department of Public Instruction
Carl A. Grant
University of Wisconsin-Madison
Walter Kintsch
University of Colorado at Boulder
Robert L. Linn
University of Colorado at Boulder
Luis C. Moll
University of Arizona
Carol M. Santa
School District No. 5 Kalispell, Montana
Anne P. Sweet
Office of Educational Research and Improvement, U.S. Department of Education
Louise Cherry Wilkinson
Rutgers University

Production Editor
Katherine P. Hutchison
University of Georgia

Dissemination Coordinator
Jordana E. Rich
University of Georgia

Text Formatter
Ann Marie Vanstone
University of Georgia

NRRC - University of Georgia
318 Aderhold
University of Georgia
Athens, Georgia 30602-7125
(706) 542-3674 Fax: (706) 542-3678
INTERNET: NRRC@uga.cc.uga.edu

NRRC - University of Maryland College Park
3216 J. M. Patterson Building
University of Maryland
College Park, Maryland 20742
(301) 405-8035 Fax: (301) 314-9625
INTERNET: NRRC@umail.umd.edu

About the National Reading Research Center

The National Reading Research Center (NRRC) is funded by the Office of Educational Research and Improvement of the U.S. Department of Education to conduct research on reading and reading instruction. The NRRC is operated by a consortium of the University of Georgia and the University of Maryland College Park in collaboration with researchers at several institutions nationwide.

The NRRC's mission is to discover and document those conditions in homes, schools, and communities that encourage children to become skilled, enthusiastic, lifelong readers. NRRC researchers are committed to advancing the development of instructional programs sensitive to the cognitive, sociocultural, and motivational factors that affect children's success in reading. NRRC researchers from a variety of disciplines conduct studies with teachers and students from widely diverse cultural and socioeconomic backgrounds in pre-kindergarten through grade 12 classrooms. Research projects deal with the influence of family and family-school interactions on the development of literacy; the interaction of sociocultural factors and motivation to read; the impact of literature-based reading programs on reading achievement; the effects of reading strategies instruction on comprehension and critical thinking in literature, science, and history; the influence of innovative group participation structures on motivation and learning; the potential of computer technology to enhance literacy; and the development of methods and standards for alternative literacy assessments.

The NRRC is further committed to the participation of teachers as full partners in its research. A better understanding of how teachers view the development of literacy, how they use knowledge from research, and how they approach change in the classroom is crucial to improving instruction. To further this understanding, the NRRC conducts school-based research in which teachers explore their own philosophical and pedagogical orientations and trace their professional growth.

Dissemination is an important feature of NRRC activities. Information on NRRC research appears in several formats. *Research Reports* communicate the results of original research or synthesize the findings of several lines of inquiry. They are written primarily for researchers studying various areas of reading and reading instruction. The *Perspective Series* presents a wide range of publications, from calls for research and commentary on research and practice to first-person accounts of experiences in schools. *Instructional Resources* include curriculum materials, instructional guides, and materials for professional growth, designed primarily for teachers.

For more information about the NRRC's research projects and other activities, or to have your name added to the mailing list, please contact:

Donna E. Alvermann, Co-Director
National Reading Research Center
318 Aderhold Hall
University of Georgia
Athens, GA 30602-7125
(706) 542-3674

John T. Guthrie, Co-Director
National Reading Research Center
3216 J. M. Patterson Building
University of Maryland
College Park, MD 20742
(301) 405-8035

NRRC Editorial Review Board

Peter Afflerbach
University of Maryland College Park

Jane Agee
University of Georgia

JoBeth Allen
University of Georgia

Janice F. Almasi
University of Buffalo–SUNY

Patty Anders
University of Arizona

Harriette Arrington
University of Kentucky

Marlia Banning
University of Utah

Jill Bartoli
Elizabethtown College

Janet Benton
Bowling Green, Kentucky

Irene Blum
Pine Springs Elementary School
Falls Church, Virginia

David Bloome
Amherst College

John Borkowski
Notre Dame University

Karen Bromley
Binghamton University

Martha Carr
University of Georgia

Suzanne Clewell
Montgomery County Public Schools
Rockville, Maryland

Joan Coley
Western Maryland College

Michelle Commeyras
University of Georgia

Linda Cooper
Shaker Heights City Schools
Shaker Heights, Ohio

Karen Costello
Connecticut Department of Education
Hartford, Connecticut

Jim Cunningham
Gibsonville, North Carolina

Karin Dahl
Ohio State University

Marcia Delany
Wilkes County Public Schools
Washington, Georgia

Lynne Diaz-Rico
California State University-San
Bernardino

Ann Egan-Robertson
Amherst College

Jim Flood
San Diego State University

Dana Fox
University of Arizona

Linda Gambrell
University of Maryland College Park

Mary Graham
McLean, Virginia

Rachel Grant
University of Maryland College Park

Barbara Guzzetti
Arizona State University

Frances Hancock
Concordia College of Saint Paul,
Minnesota

Kathleen Heubach
University of Georgia

Sally Hudson-Ross
University of Georgia

Cynthia Hynd
University of Georgia

David Jardine
University of Calgary

Robert Jimenez
University of Oregon

Michelle Kelly
University of Utah

James King
University of South Florida

Kate Kirby
Gwinnett County Public Schools
Lawrenceville, Georgia

Linda Labbo
University of Georgia

Michael Law
University of Georgia

Donald T. Leu
Syracuse University

Susan Lytle
University of Pennsylvania

Bert Mangino
Las Vegas, Nevada

Susan Mazzoni
Baltimore, Maryland

Ann Dacey McCann
University of Maryland College Park

Sarah McCarthey
University of Texas at Austin

Veda McClain
University of Georgia

Lisa McFalls
University of Georgia

Randy McGinnis
University of Maryland

Mike McKenna
Georgia Southern University

Barbara Michalove
Fowler Drive Elementary School
Athens, Georgia

Elizabeth B. Moje
University of Utah

Lesley Morrow
Rutgers University

Bruce Murray
University of Georgia

Susan Neuman
Temple University

John O'Flahavan
University of Maryland College Park

Marilyn Ohlhausen-McKinney
University of Nevada

Penny Oldfather
University of Georgia

Barbara M. Palmer
Mount Saint Mary's College

Stephen Phelps
Buffalo State College

Mike Pickle
Georgia Southern University

Amber T. Prince
Berry College

Gaoyin Qian
Lehman College-CUNY

Tom Reeves
University of Georgia

Lenore Ringler
New York University

Mary Roe
University of Delaware

Nadeen T. Ruiz
California State University-
Sacramento

Olivia Saracho
University of Maryland College Park

Paula Schwanenflugel
University of Georgia

Robert Serpell
University of Maryland Baltimore
County

Betty Shockley
Fowler Drive Elementary School
Athens, Georgia

Wayne H. Slater
University of Maryland College Park

Margaret Smith
Las Vegas, Nevada

Susan Sonnenschein
University of Maryland Baltimore
County

Bernard Spodek
University of Illinois

Steve Stahl
University of Georgia

Roger Stewart
University of Wyoming

Anne P. Sweet
Office of Educational Research
and Improvement

Louise Tomlinson
University of Georgia

Bruce VanSledright
University of Maryland College Park

Barbara Walker
Eastern Montana University-Billings

Louise Waynant
Prince George's County Schools
Upper Marlboro, Maryland

Dera Weaver
Athens Academy
Athens, Georgia

Jane West
Agnes Scott College

Renee Weisburg
Elkins Park, Pennsylvania

Allen Wigfield
University of Maryland College Park

Shelley Wong
University of Maryland College Park

Josephine Peyton Young
University of Georgia

Hallie Yupp
California State University

About the Authors

Michael Pressley is a Professor in the Department of Educational Psychology and Statitistics, the State University of New York at Albany. He has studied strategies instruction extensively since the 1980s and is an authority on reading comprehension.

Joan Rankin is an Associate Professor in the Department of Special Education and Communication Disorders at the University of Nebraska-Lincoln. She conducts research on literacy instruction for children with disabilities.

Linda Yokoi is a graduate student in the Department of Educational Psychology and Statistics, the State University of New York at Albany, where she is continuing her work on studies skills and cognitive development.

National Reading Research Center
Universities of Georgia and Maryland
Reading Research Report No. 41
Summer 1995

A Survey of Instructional Practices of Primary Teachers Nominated as Effective in Promoting Literacy

Michael Pressley
State University of New York at Albany

Joan Rankin
University of Nebraska

Linda Yokoi
State University of New York at Albany

Abstract. *Kindergarten (n = 23), grade-1 (n = 34), and grade-2 (n = 26) teachers, who were nominated by their supervisors (n = 45) as effective in educating their students to be readers and writers, responded to two questionnaires about their practice. As expected, there were shifts in reported practices between kindergarten and grade 2, although there was much more similarity than difference in the reports of kindergarten, grade-1, and grade-2 teachers. The teachers claimed commitments to (a) qualitatively similar instruction for students of all abilities, along with additional support for weaker readers; (b) literate classroom environments; (c) modeling and teaching of both lower-order (e.g., decoding) skills and higher-order (e.g., comprehension) processes; (d) extensive and diverse types of reading by students; (e) teaching students to plan, draft, and revise as part of writing; (f) engaging literacy instruction (i.e., instruction motivating literate activities); and (g) monitoring of students' progress in literacy.*

What is the nature of effective primary literacy instruction? Many theories and models have been proposed in response to this question (see Chall, 1967; Flesch, 1955; Goodman & Goodman, 1979), each emphasizing particular processes and instruction stimulating those processes. Invariably, advocates of a model hypothesize that children will be more literate if they experience the model they espouse rather than other forms of literacy instruction. Such hypotheses have led to tests of various types of primary-level literacy instruction (Barr, 1984).

The most famous set of such evaluations was the "first-grade studies" in the 1960s sponsored by the U.S. Office of Education (Adams, 1990, chap. 3; Barr, 1984; Bond & Dykstra, 1967). A strength of these studies was that each of various approaches to reading instruction was tested in several different

experiments and, typically, by different research teams. By most accountings, however, there was no clear overall winner in the first-grade studies (Barr, 1984; Bond & Dykstra, 1967) nor in extensions of the comparisons to grade-2 level (Dykstra, 1968). Although word reading sometimes was improved in programs targeted at increasing decoding skills and knowledge of letter-sound consistencies in words, vocabulary and comprehension were affected little by alternatives to the traditional basal approach. (See Guthrie and Tyler, 1978, for a more optimistic appraisal of the linguistic and the phonics plus basal approaches, which they concluded produced at least slightly greater reading achievement than the alternatives.) Given the ambiguity in the results of the first-grade studies, the great debate about the optimal beginning reading instruction raged on (Chall, 1967).

The models in the debate have shifted since the late 1960s, however. A popular contemporary approach, whole language, emphasizes language processes and the creation of learning environments in which students experience authentic reading and writing (Weaver, 1990). Both linguistic and cognitive development are presumed to be stimulated by experiencing good literature and attempting to compose new meanings (e.g., Goodman, 1990). There is opposition to explicit, systematic teaching of reading skills, especially elements of decoding (e.g., King & Goodman, 1990). According to whole language theorists, any skills instruction that occurs should be in the context of natural reading and only as needed by individual readers. Consistent with psycholinguistic models of development, whole language advocates believe that the development of literacy is a natural by-product of immersion in high-quality literacy environments.

In contrast, other reading educators argue that learning to break the code is a critical part of primary-level reading and that breaking the code is most likely when students are provided systematic instruction in decoding (e.g., Chall, 1967). There is a growing data base that such instruction increases reading competence (Adams, 1990), especially for students who experience difficulties learning to read when instruction is less explicit (Mather, 1992; Pressley & Rankin, 1994).

Increasingly, explicit decoding instruction is conceived in cognitive science terms, largely because much recent evidence supporting it has been generated by cognitive psychologists and cognitively oriented reading researchers. For example, some cognitive scientists believe that the development of strong and complex connections between words and their components (Adams, 1990; Foorman, 1994) follows from explicit instruction in phonemic awareness, letter recognition, attention to the sounds of words, blending of sounds, and practice in reading and writing words to the point that they are automatically recognized and produced. Beyond word-level decoding, many cognitive scientists conceive of text comprehension as the application of particular information processes to text (e.g., relating new text to prior knowledge, asking questions in reaction to text, visualizing text content, summarizing). Skilled comprehension requires self-regulated use of such information processes. A start on the development of such self-regulation is teaching of comprehension strategies that

stimulate processes used by good comprehenders, for example, instruction of prior knowledge activation as a prereading strategy, self-questioning during reading, construction of mental images capturing the ideas covered in text, and finding main ideas (Brown, Bransford, Ferrara, & Campione, 1983; Pressley et al., 1992).

There has been much research about the effectiveness of whole language, traditional decoding, and cognitive science-inspired primary-level instruction. The evidence is growing that whole language experiences stimulate literate activities and positive attitudes toward literacy in children, as well as increase understanding about the nature of reading and writing (e.g., Graham & Harris, 1994; Morrow, 1990, 1991, 1992; Neuman & Roskos, 1990, 1992). Even so, a disturbing finding is that, compared to conventional instruction, whole language programs do not seem to have much of an effect on early reading achievement as measured by standardized tests of decoding, vocabulary, comprehension, and writing (Graham & Harris, 1994; Stahl, McKenna, & Pagnucco, 1994; Stahl & Miller, 1989). In contrast, programs explicitly teaching phonemic awareness, phonics, and letter-sound analysis have promoted improved performance on standardized tests and have proven superior to programs emphasizing meaning-making, such as whole language (Adams, 1990; Pflaum, Walberg, Karegianes, & Rasher, 1980). In addition, reading programs that explicitly teach students to use repertoires of comprehension strategies have proven their worth in promoting understanding of text (Bereiter & Bird, 1985; Palincsar & Brown, 1984), including understanding as measured by standardized assessments (e.g., Brown, Pressley, Van Meter, & Schuder, 1995).

The hypothetico-deductive studies comparing various types of primary reading instruction with traditional instruction, however, have not provided a satisfactory answer to the question, "What is the nature of effective primary reading instruction?" Most critically, close examination of many recent studies supporting explicit teaching of decoding and instruction of comprehension strategies reveals that there are often many elements of whole language in such teaching, including the reading of outstanding children's literature and daily writing (Pflaum et al., 1980; Pressley et al., 1991, 1992). What has emerged in recent years, in part from the realization that explicit decoding and comprehension instruction typically occur in the context of other components, is a new hypothesis: Effective primary literacy instruction is multifaceted rather than based on one approach or another (e.g., Adams, 1990; Cazden, 1992; Delpit, 1986; Duffy, 1991; Fisher & Hiebert, 1990; McCaslin, 1989; Pressley, 1994; Stahl et al., 1994). Based on the available data, however, few details can be added to the generalization that effective instruction often integrates whole language, letter- and word-level teaching, and explicit instruction of comprehension processes. The investigation reported here was designed to provide a window on the details.

We used a research methodology very different from the hypothetico-deductive approach that has predominated prior research in this area. Our assumption, consistent with expert theory (Chi, Glaser, & Farr, 1988; Ericsson &

Smith, 1991; Hoffmann, 1992), was that effective primary reading teachers would have a privileged understanding of literacy instruction. That is, they would be aware of the elements of their teaching, in part because their teaching is the result of many decisions about what works in their classrooms and what does not. Moreover, we expected that such teachers would be able to relate their knowledge of teaching in response to focused questions, just as other professionals can relate their expertise when questioned (Diaper, 1989; Meyer & Booker, 1991; Scott, Clayton, & Gibson, 1991). Thus, in this study we pursued a detailed description of effective primary reading instruction by surveying reputationally effective primary reading teachers.

In doing so, we begin to fill a somewhat surprising gap in the literature. We could find no evidence of a systematic study of effective primary reading teachers' knowledge about the components that need to be included in primary literacy instruction. There are testimonials about the practice and power of particular approaches to reading instruction, most notably, about whole language (e.g., Ohanian, 1994; Shannon, 1994; Weaver, 1990; Whitmore & Goodman, 1992; see the bibliography in Smith, 1994, for many examples). Entire practitioner journals, such as *Reading Teacher* and *Journal of Reading*, regularly publish the perspectives of certain teachers about specific reading instructional methods. Still, those providing testimonies about or descriptions of particular methods were not selected because of their effectiveness as teachers, but rather because of the methods they used in their classrooms. In contrast, in this study, a number of teachers were selected for participation on the basis of perceived effectiveness.

Method

Participants

Our goal in selecting participants was to identify a sample of effective primary-level literacy teachers. We included participants from across the country to avoid local and regional biases. Fifty reading supervisors were selected randomly from the International Reading Association's list of elementary language arts supervisors. In a letter, they were asked to identify the most effective kindergarten, grade-1, and grade-2 literacy educators in their jurisdiction, with effective defined as "successful in educating large proportions of their students to be readers and writers." Forty-five of the supervisors replied to this request, with each nominating one kindergarten, one grade-1, and one grade-2 teacher. As part of the nomination process, the reading supervisors were asked to specify indicators and sources of information informing their opinions of nominated teachers. The possibilities included the following: (1) achievement records of students within a teacher's classes (58% of nominees); (2) conversations in which the nominated teacher has described sound teaching philosophy and practices used in the classroom (96% of nominees); (3) direct observations of the teacher's teaching (88% of nominees); (4) interactions with the teacher during in-service sessions that suggested the teacher can integrate and apply sound principles of reading instruction (89% of nominees);

and (5) positive comments from other teachers, administrators, or parents regarding the skills and effectiveness of the teacher (94% of nominees). Nominating supervisors were encouraged to provide additional explanation supporting their positive view of the teacher and were asked to rate their confidence in their evaluation of the teacher by indicating whether they were (a) absolutely certain, (b) highly confident, (c) confident, (d) somewhat confident, or (e) not confident in their opinion. For all teachers in the study, the nominators supported their nomination with at least three of the indicators and rated their confidence in the nomination as absolutely certain or highly confident.

Of the 135 teachers nominated, 113 replied to the first-round, short questionnaire sent to them in this study; 86 of these 113 replied to the second and final questionnaire, with 83 of the 86 providing usable responses. The first questionnaire was completed in fall 1992; the second was completed in spring 1993.

Teacher characteristics. The 83 participants who provided usable responses to the final questionnaire (23 kindergarten teachers, 34 grade-1 teachers, and 26 grade-2 teachers) came from 23 states and represented all major geographic regions of the United States. Forty-two participants held a bachelor's degree only; 41 also held a master's degree. The teachers were generally experienced, ranging from 3 to 35 years of teaching, with a mean of 16.7 years.

School characteristics. The schools in which participants worked included the diversity of the 1990s American population of school children. For example, the percentage of students in a teacher's school qualifying for free lunch ranged from 0% to 95% (mean = 38%). The percentage of students receiving special education services in these classrooms ranged from 0% to 36% (mean = 10%). Collapsing across all of the schools served by participating teachers, 17% of students in the schools in which the teachers taught were African American (classroom range = 0% to 100%; eight teachers from majority African-American schools), 9% were Mexican American (school range = 0% to 81%; four teachers from majority Mexican-American schools), 6% were Asian American (school range = 0% to 100%), and 7% were native American (school range = 0% to 100%; four teachers served majority Native-American schools).

Questionnaire

First short questionnaire. The overarching goal of the study was to solicit information from the teachers about their literacy instruction. First, all nominated teachers were asked to respond to a short questionnaire requesting three lists of 10 practices they believed "essential in their literacy instruction." Each teacher generated one list for good readers, one for average readers, and one for weaker readers. A letter accompanying this short questionnaire emphasized that the recipients were among a select sample of teachers who had been identified as effective primary reading teachers by their supervisors and stated that we were seeking insights into what actually occurs in their classrooms. The response rate to this request was more than 83%: 113 of the 135 nominated teachers responded.

Final questionnaire. The 300 practices the teachers cited in response to the short questionnaire were categorized. Some practices were logically related to one another, however, such as some teachers reporting that phonics should never be taught in isolation and others arguing for daily phonics instruction based on workbook exercises. We used all 300+ practices to develop a final questionnaire assessing reading and writing instruction, items that teachers could respond to objectively (e.g., measuring the frequency of the teacher's use of an instructional practice on a 7-point Likert scale from never to several times daily). Every practice cited in response to the initial questionnaire was represented on the final questionnaire. As a means of broadening the categories of response with respect to educational practices that might be targeted at weaker students, we also sent a short survey to a sample of special educators. The special education teachers mentioned a few instructional practices that the regular education teachers did not cite, such as varying instruction with learning style and teaching attending skills. These practices were also assessed on the final questionnaire.

The final questionnaire requested 436 responses of various kinds. It was 27 pages long and sent to the 113 teachers who responded to the initial questionnaire. The teachers were informed that the survey would require about 45 min to complete and were asked to return it within 3 weeks of receiving it. After 3 weeks, we sent a post-card reminder.

The general directions accompanying the questionnaire were the following:

> Many thanks for your reply to the initial round of our survey. The responses we received were exceptionally illuminating. There were so many elements of effective instruction mentioned by teachers, however, that we need to ask more focussed questions in order to produce quantifiable data for the survey. The enclosed items are intended to be answered quickly. All of these items are tapping what you know very well, your own instructional practices and thus, we suspect most items will be answered without hesitation on your part. This knowledge that you possess about your primary reading instruction is extremely valuable.

A total of 86 questionnaires were returned (76% response rate). Three returned questionnaires were not usable, however, because they were provided by teachers with teaching assignments other than kindergarten, grade 1, *or* grade 2 (e.g., teaching a combined grades 1–3).

A variety of question types were used in order to have questions sensitively tapping each practice suggested in the responses to the first questionnaire. In designing questions, we tried to describe practices using terms that appeared in the responses to the first questionnaire.

Two hundred thirty-one times, teachers were asked to check a particular strategy, emphasis, practice, technique, or material if it was present in their classroom. For example, if teachers indicated that they taught concepts of print, they responded to a follow-up item of this type:

> Which of the following concepts of print do you teach? __ none, __ directionality of

print, __ concept of a letter, __ concept of a word, __ punctuation, __ parts of a book, __ sounds are associated with print (*Such items involving numbers of teachers reporting a practice were analyzed non-parametrically.*)

Sixty-six items asked teachers to indicate the frequency of an instructional technique or area of emphasis on 8-point rating scales (e.g., from 0 = never to 7 = several times a day, with midpoint 4 = weekly):

> Do you use "big books"? (never to several times a day scale)
>
> After a story, do you ask students "comprehension questions"? (not at all to all stories scale) (*Such items involving numerical values generated by teachers, one value per teacher, were analyzed parametrically.*)

Another 65 items asked teachers to estimate the percentage of time or the number of minutes allocated to an activity, as in the following example:

> What percentage of the material read by your students is outstanding children's literature? . . .written at a "controlled" reading level? . . . written to provide practice in phonetic elements and/or patterns. . . high interest, low vocabulary materials?

Thirty-three items requested teachers to categorize their use of instructional practices as "always, sometimes, or never" or "regularly, occasionally, or never," as in the following examples:

> Which of the following extension activities do you use regularly, occasionally, or never?: arts/crafts with print attached, cooking activities, dramatics or puppet plays, drawing or illustrating stories, movement activities, field trips, games
>
> Are home/parents involved in your reading instruction for good readers? . . .average readers? . . .weaker readers?

Forty-three items required yes/no responses, such as the following questions:

> Do you teach reading across the curriculum?
>
> Do you teach critical thinking skills?

Sixteen items required a written explanation or clarification of a response, with most of these items requesting "other" responses. (These other responses were not informative, for the most part, and they are not included in the results section.) A few of these open- ended questions probed issues that we considered especially important to illuminate, based on review of the first-round lists generated by the teachers. These probes included the following:

> If you consider yourself only somewhat consistent with whole language, please clarify.
>
> If . . . [you teach reading across the curriculum], please describe your practice. (*Such items analyzed both quantitatively and qualitatively.*)

Table 1. Classroom Characteristics and Instructional Practices Reported Less Often with Increasing Grade Level

	Kindergarten	Grade 1	Grade 2
Learning Environment			
Signs and Labels	78% of teachers	76%	46%
Learning centers	100% of teachers	85%	73%
General Teaching Processes			
Letter recognition drills	65% of teachers	26%	8%
Small group work and instruction	----------	33% of instruction	17%
Songs (e.g., Alphabet Song)	100% of teachers	79%	73%
Teaching of Reading			
Teaching letter recognition	100% of teachers	91%	50%
Copying/tracing letters	----------	13% of instruction	2%
Teaching alphabetic principle:			
Good readers	90% of teachers	75%	43%
Average readers	95% of teachers	81%	67%
Teaching focussing on sounds of words	100% of teachers	85%	65%
Teaching concepts of print	Daily	Daily	Weekly
Concept of a letter	100% of teachers	85%	42%
Directions of print	96% of teachers	82%	42%
Phonics drills	43% of teachers	21%	12%
Teaching of phonics using games and puzzles	91% of teachers	56%	50%
Letter of day/week	57% of teachers	18%	8%
Decoding strategies instruction to weaker readers	----------	Daily	Several times a week
Explicit attempts to develop sight word vocabulary:			
Good readers	----------	79% of teachers	54%
Average readers	83% of teachers	82%	54%
Teacher rereading stories	Several times a week	Weekly	Several times a year to monthly
Shared big book reading	Several times a week	Several times a week	Several times a year
Rereading of big books:			
Good readers	100% of teachers	85%	50%
Average readers	100% of teachers	91%	75%
Chart stories and poems	----------	Several times a week	Monthly
Picture books	46% of materials	30%	-----
Patterned books	32% of materials, Several times a week	27%, Weekly to several times a week	11%, Monthly
Reading aloud of patterned books	85% of teachers	82%	54%
Controlled reading-level materials	----------	40% of materials	22%

Table 1. (continued)

	Kindergarten	Grade 1	Grade 2
Teaching of Reading (continued)			
Materials providing practice reading specific phonetic elements	----------	28% of materials	8%
"Easy" reading	54% of reading	33%	31%
"Frustration"-level reading:			
Good readers	20%	11%	11%
Average readers	21%	12%	12%
Teaching of Writing			
Student dictation of stories to adults (including whole class dictation to teacher)	Monthly	Several times a year	Each semester
Shared writing	----------	Several times a year	Monthly
Accountability			
Parent conferences	----------	Several times a year	Each semester

Note. $p < .05$ for each effect summarized in this table. When only two grade levels are indicated in the table, trend involving third-grade level was in other direction and not statistically significant.

For 22 of the items, teachers were required to respond separately for good, average, and weaker students, as illustrated by this example:

> How much of your instructional time in reading involves individual oral reading by students? (*Teachers asked to respond in minutes for good, average, and weaker readers.*)

Results

We recognized from the outset that the diverse question types on our instrument would preclude many traditional approaches to analyzing questionnaire data, especially ones aggregating over items that assessed related issues. The response distributions to many of the items made aggregation over items untenable anyway (e.g., a number of elements of instruction were endorsed either by most teachers or few teachers, so that responses to the items were not normally distributed). Thus, in this section, we focus on analysis of individual items.

More positively, the responses were striking and orderly for many items—that is, responses did not have the randomness associated with unreliability. In addition, there were many indications that the teachers took great care in responding to the items (e.g., explanations offered about responses in the margins of the questionnaire, all questions answered by most

Table 2. Classroom Characteristics and Instructional Practices Reported More Often with Increasing Grade Level

	Kindergarten	Grade 1	Grade 2
General Teaching Processes			
Round-robin reading	Each semester	Each semester	Several times a year
Individually guided reading for weaker readers	33% of reading	53%	52%
Teaching of Reading			
Teaching decoding strategies to weaker readers	Several times a week	Daily	-----
Teaching use of syntax cues for decoding	35% of teachers	88%	81%
Teaching common phonics rules	13% of teachers	71%	85%
Teaching morphemic-structural analysis for decoding	17% of teachers	76%	92%
Teaching syllabification rules for decoding	0% of teachers	29%	46%
Spelling drills	9% of teachers	41%	69%
Spelling tests	0% of teachers	65%	88%
Sight word drills	35% of teachers	50%	-----
Teaching comprehension strategies:			
Activating prior knowledge	70% of teachers	91%	92%
Question generation	57% of teachers	82%	100%
Finding main ideas	61% of teachers	85%	100%
Summarization	70% of teachers	76%	100%
Using story grammar cues	22% of teachers	58%	58%
Teaching of the critical thinking skills:			
Webbing	61% of teachers	88%	96%
Identifying causes and effects	61% of teachers	94%	100%
Preteaching of vocabulary	30% of teachers	68%	69%
Choral reading	57% of teachers	82%	92%
Homework	32% of teachers	79%	85%
Student reading aloud to other people	Weekly	Several times a week	Several times a week
Student reading aloud:			
Poetry	60% of teachers	85%	88%
Trade books	40% of teachers	91%	-----
Basal stories	10% of teachers	67%	73%
Silent reading	11 min daily	17 min	21 min
Chapter books	3% of materials	7%	12%
Basal use	Each semester, 2% of materials	Monthly, 22% of materials	Monthly, 21% of materials
Controlled reading-level materials	24% of materials	40%	-----
Materials providing practice with specific phonetic elements	10% of materials	28%	-----
"Instructional"-level reading:			
Average readers	45% of reading	60%	-----
Weaker readers	40% of reading	50%	55%

Table 2. (continued)

	Kindergarten	Grade 1	Grade 2
Teaching of Writing			
Student storywriting	61% of teachers	94%	96%
Writing in response to reading	Several times a year	Weekly	Weekly
Planning before writing	48% of teachers	82%	92%
Revising during writing	13% of teachers	71%	88%
Publishing story collections	27% of teachers	59%	69%
Teaching punctuation	52% of teachers	88%	96%
Out-of-context	5% of all teaching of punctuation	9%	27%
Accountability			
Writing portfolios	48% of teachers	79%	85%

Note. $p < .05$ for each effect summarized in this table. When only two grade levels are indicated in the table, trend involving third-grade level was in other direction and not statistically significant.

teachers, extreme neatness in responses). Thus, we concluded that some important sources of error were probably minimized (e.g., carelessness).

The text of this results section is organized around issues addressed in the questionnaire, with many issues addressed by several questions and different types of questions. A number of findings are described prosaically in what follows based on Likert means (e.g., an instructional practice rated 6.72 on a "never" (0) to "several times a day" (7) scale is reported as occurring "several times a day," the whole number value closest to 6.72).

Based on responses to the first, short questionnaire, we expected that the reports would vary by grade level, and they did somewhat. That is, items were analyzed either parametrically or nonparametrically, depending on the type of item, with respect to grade level ($p < .05$ for grade-level effects and all other effects taken up in the results). The most important grade-level differences are summarized in Tables 1 and 2. In general, with increasing grade level, and as students mastered prereading skills and learned to decode, instruction of higher-order competencies were reported more often. Analogously, reports of picture books and patterned books gave way to reports of more sophisticated materials with advancing grade. Also, teachers claimed greater attention to mechanics, such as punctuation and spelling, with grade 1-2 students than with kindergarten students. There was also increased reporting of planning and editing of writing from kindergarten to grade 2. Although with

Table 3. Instructional Practices Reported as More Explicit/Extensive for Weaker Compared to Stronger Readers

	Good	Average	Weaker
Grade 1:			
Activities requiring students to focus on the sounds of words	Weekly	Weekly	Several times a week
Teaching of letter-sound associations	71% of teachers	85%	97%
Individually guided writing	25% of teachers	31%	37%
Decoding strategies instruction	Several times a week	Several times a week	Daily
Grades 1 and 2:			
Teaching of the alphabetic principle:			
Grade 1	71% of teachers	76%	100%
Grade 2	35% of teachers	54%	77%
Teaching of visual discrimination:			
Grade 1	65% of teachers	74%	85%
Grade 2	65% of teachers	88%	92%
Teaching of alphabetic recognition:			
Grade 1	35% of teachers	50%	91%
Grade 2	12% of teachers	15%	46%
Grade 2:			
Teaching of auditory discrimination	65% of teachers	88%	92%
Development of sight vocabulary	54% of teachers	54%	85%
Rereading of big books	46% of teachers	69%	77%
Individual oral reading	16 min daily	16 min	25 min

Note. $p < .05$ per effect.

increasing grade, there were more reports of traditional approaches to instruction (such as round-robin reading, use of basals, spelling tests, and homework), the teachers did not report these approaches as predominating in their classrooms, but rather as blended with many other components. Important differences in grade-level reports are highlighted in what follows.

In responses to the first questionnaire, there were reports of some differences in the explicitness and extensiveness of instruction as a function of student reading achievement. Thus, 32 of the final survey items requested teachers to estimate the explicitness and/or extensiveness of their instruction separately for good, average, and weaker readers. For the most part, statistical analyses of these items suggested similar instruction for students, regardless of ability, although there were also some differences as a function of student ability (summarized in Table 3). In general, more explicit/extensive instruction was reported for weaker readers with respect to

letter- and word-level skills, such as decoding and sight word learning. Nonetheless, we emphasize that the reported differences in instruction as a function of reader ability were few.

General Characteristics of Learning Environments

Teachers described classrooms filled with print. All teachers in the sample indicated that they attempted to create a *literate environment* in their classrooms, including an in-class library. All but one claimed to display student work in the room. All but three teachers reported chart stories and chart poems. Most (71%) reported posting of word lists and use of signs/labels in the classroom (67%; for grade-level differences, however, see Table 1). The teachers reported *learning centers* (i.e., listening, reading, or writing centers), although their use declined with advancing grade level.

These classrooms were rich with *stories*. On average, the teachers reported reading to their students daily, with rereading less common and decreasing with increasing grade level. The teachers reported telling stories to students, weekly on average. Sixty-six percent reported use of audiotaped stories and 33% reported presentation of prerecorded videotaped stories.

When asked whether they were *whole language* teachers, 54% responded "yes" and 43% claimed they were somewhat whole language. One possibility we explored was that reported instruction might have been different among those teachers claiming to be wholly committed to whole language than among teachers less committed. Within each grade level, we examined the correlations between teacher commitment to whole language and all other variables. There was one striking, consistent correlation across grades between commitment to whole language and reported practice: Teachers fully committed to whole language instruction were less likely to use basals than those who were less committed to this philosophy, $r = .49$ at kindergarten, $r = .59$ at grade 1, and $r = .66$ at grade 2.

General Teaching Processes

Participants in this study reported applying many effective conventional instructional methods in the service of literacy education.

Modeling. The teachers reported overt modeling of reading for students on a daily basis; that is, they reported reading aloud for students, making clear to them what is meant by reading. They also reported overt modeling of comprehension strategies several times a week and modeling of the writing process weekly. The love of reading was reported as modeled daily, the love of writing as modeled weekly.

Practice and repetition. Practice of isolated skills (e.g., on a computer, skill sheets, workbooks, songs) was estimated as averaging 13% of the literacy instructional day. The majority (59%) of the sample reported using drills, drilling for letter recognition (which decreased with increasing grade level), phonics/letter-sound association, and spelling (which increased with increasing grade level).

Grouping. The teachers reported a combination of whole-group, small-group, and individual instruction as well as individual seat-

work as part of the literacy instructional day. More whole-group instruction (about half of total instruction) was reported than small group instruction, which varied with grade level—about one-third of instruction at kindergarten and grade 1 and about one-sixth of instruction at grade 2. More small group instruction was claimed than individual instruction, reported as about one-sixth of total literacy instruction. The teachers believed that only about 10% of their students' time was spent in seatwork. They reported cooperative grouping for 46% of their instruction on average.

Notably, some traditional approaches to primary literacy grouping were not endorsed. Of the 55 teachers indicating use of ability grouping, only 19 reported use of the traditional three-group approach (i.e., high, medium, and low reading groups). Round-robin reading was reported as occurring rarely (i.e., once a month), although slightly more at the grades 1 and 2 than in kindergarten.

Sensitivity to students and individual student needs. The teachers claimed sensitivity to student needs. For instance, 96% of the teachers indicated that they permitted progress in literacy at students' own pace, 89% reported attempting to assess the learning styles of their students, and 92% reported attempting to adjust instruction to students' learning style. The teachers claimed that 46% of their total instructional time involved mini-lessons targeted at "things students needed to know at this moment." The teachers estimated that they spent 17% of their instructional time reteaching the entire class and 21% reteaching small groups or individual students. Grades 1 and 2 teachers reported that, for weaker students, the majority of instruction involved individually guided reading.

Integration with other curricula and activities. The teachers reported that literacy instruction was integrated with the rest of the curriculum: 93% indicated reading instruction across the curriculum; the corresponding figure for writing was 88%; for listening, 88%; and for speaking, 75%. Ninety-four percent reported the use of themes extending to other parts of the curriculum to organize reading and writing instruction. In response to an open-ended question, teachers mentioned reading as part of science instruction (35%), social studies (31%), and math (23%), with another 11% simply claiming that reading instruction occurred in all content areas.

All teachers reported using extension activities. These included arts and crafts associated with print experiences, illustration of stories read, games, cooking, and movement activities.

Teaching of Reading

What is taught. When asked to divide a total of 100% of their literacy instruction into the percentage dedicated to meaning-making versus decoding, meaning-making predominated 71% to 27%. This translated into the teaching of the content and processes summarized in this subsection. Thus, more than 89% of the teachers reported teaching *skills and knowledge prerequisite to reading*, such as *auditory discrimination* skills, *visual discrimination* skills, *concepts of print* (e.g., punctuation, print-sound association, parts of a book, concept of a word; see Table 1 for grade-level

differences, however), and *letter-sound associations*. Some very basic skills were taught by most kindergarten teachers but were much less prominent with increasing grade. These included letter-recognition activities and *copying/tracing of letters*. Especially important, the proportion of teachers claiming to teach the *alphabetic principle*—that all 26 letter symbols are worth learning because each stands for sounds in spoken words (Adams, 1990)—declined with increasing grade. Consistent with decline in teaching of the alphabetic principle with advancing grade level, there were fewer reports of *activities requiring focus on the sounds of words*.

An important finding was that for every basic skill, the majority of teachers who reported teaching it claimed to do so in the context of actual reading and writing. Even so, for every basic skill except concepts of print, at least 88% of the teachers who reported teaching the skill also reported some isolated skills instruction, most often involving games and puzzles to teach the skill or provide practice with it.

The teachers reported teaching *decoding strategies* and *word-level skills and knowledge* at least several times a week. Several decoding strategies were reported as taught by most teachers: using context cues to decode words (98% of teachers), using picture cues to decode words (96%), and sounding out words using letter-sound knowledge (92%). Other strategies were taught little in kindergarten but much more by grade 2: (1) using syntax cues to decode words; (2) using common phonics rules; (3) using morphemic structural analysis clues, including prefixes, suffixes, and base words; and (4) syllabification rules.

The commitment to teaching decoding also came through in the response to questions about the explicit teaching of *phonics*, which 95% of the teachers said they did. Teachers reported that they used a variety of procedures for doing so; most prominently, (1) in the context of real reading (90% of teachers), (2) during discussion of sounds as part of writing (84%), and (3) through invented spelling (84%). Teaching of phonics outside the context of natural reading was reported as well, however, with 43% of the teachers claiming use of workbooks and skill sheets and 32% reporting use of a phonics program. At least half of teachers at each grade reported use of games and puzzles to teach phonics, although the proportions of teachers claiming to do so decreased with advancing grade. Use of the letter-of-the-day or -week approach was reported by the majority of teachers only at kindergarten level. The teachers decided which phonics elements to teach according to class/small-group needs (77% of teachers), individual student needs (74%), the sequence prescribed in a basal series or phonics program (40%), or the sequence in a scope and sequence chart (14%). In short, there was much more commitment to teaching of phonics in ways that were consistent with ongoing reading and writing and students' needs during reading and writing than to teaching phonics in isolation, although there were reports of phonics instruction in isolation and/or as prescribed by a standard approach.

The reported explicit teaching of *spelling* increased with grade level, for example, as reflected in increased reporting of spelling drills and tests with advancing grade. Grades 1

and 2 teachers indicated diverse sources for words tested, including published spelling curricula (38% of teachers), words selected from basal or other stories (33%), items selected from students' writing (30%), lists (Dolch, Chall) of frequently used words (27%), a district-developed spelling program (17%), and student self-selected words (14%). When teachers were asked to respond to the open-ended item, "How do you react to children's invented spellings?", all teachers indicated at least acceptance of invented spellings much of the time. Even so, correct spellings were expected at times. Thus, 11 of the grade 2 teachers indicated in response to an open-ended question about spelling that correct spelling (e.g., high-frequency words) was expected in final drafts of writing for publication.

The teachers (96%) reported explicitly attempting to develop *new vocabulary*. Most (95%) reported that they did so in the context of other reading and writing, a claim consistent with other claims, including 93% of the teachers reporting that new vocabulary came from stories read in class, and 65% reporting instruction of vocabulary that students wanted to use in their writing.

Most teachers reported attempting explicitly to develop *sight word vocabulary*, although less so for good and average readers with advancing grade level. Most (87%) teachers who attempted to develop sight word competence reported doing so in the context of other reading and writing activities. Nonetheless, there were also reports of isolated development of vocabulary, for example, by sight word drilling, which was reported more by grade 1 than by kindergarten teachers.

Critical to meaning-making is *comprehension*, including understanding of *text elements*, with 96% of the teachers reporting they taught text elements and at least three-quarters of teachers reporting instruction of each text element (i.e., theme/main idea, details versus main idea, plot, sequencing, cause-and-effect relations in stories, story mapping/webbing, character analysis, and the idea of the illustrator as an interpreter of a story).

All teachers reported that they taught *comprehension strategies*, with this commitment holding for readers of all ability levels. A dramatic finding was that all teachers at all grades reported teaching prediction. Seventy-three percent reported teaching visualization as a strategy. Other comprehension strategies (i.e., activating prior knowledge, asking questions, main idea, summarization, and looking for story grammar elements) were reported more frequently with advancing grade.

All teachers claimed to teach *critical thinking strategies*. More than 93% reported teaching brainstorming, categorizing, and recalling details. The majority reported teaching students how to make distinctions, how to make evaluations, webbing, and identifying causes and effects, with the latter two increasingly endorsed with increasing grade.

Because possession of background knowledge is critical to understanding text, it is notable that teachers reported that they attempted to *develop students' background knowledge*, on average, for more than half the stories they covered (i.e., through prereading discussion, related reading, hands-on experiences, or videos/movies). They indicated developing students' understanding of important concepts

(e.g., through pre-teaching of vocabulary) before or as they encountered them in a story, again for more than half the stories on average. The proportion of teachers endorsing such preteaching increased with advancing grade.

Types of reading and reading-related activities. Teachers reported having students involved in many types of reading experiences. The percentage of teachers reporting *choral reading* increased with grade, as did the percentage of teachers assigning *reading homework*. Most (i.e., 90% or more) of the teachers reported the following activities: *shared reading*, including reading along with big books (see Table 1, however, for evidence of grade-level differences); student *read-alouds* to peers, teachers, other adults, older and younger children (increasing in frequency with advancing grade level) of poetry, trade books, and basals; student re-readings of stories, books, and big books; *silent reading* (increasing in frequency with advancing grade level); and *student discussions of stories and literature*. Many teachers (69%) reported *student book sharing* as part of literacy instruction—for example, book reports or informal comments to other students about books they have read.

What is read. The teachers on average reported that 73% of the reading in their classrooms was of *outstanding children's literature*. In contrast, only 6% was described as *expository material*, reflecting a heavy bias toward narratives and other clearly literary genres. The teachers reported that a mean of 12% of their reading was of *poems*.

Picture books and predictable books declined in prominence with advancing grade. *Chapter books* increased in occurrence from kindergarten to grade 2. The percentage of reading from *basal materials* also increased with advancing grade level. Reported basal use was highly variable, however, ranging from no use of basals to daily use of them. (See the earlier result relating basal use to whole language commitment.) Consistent with the reported use of basals, which often attempt to use controlled vocabulary and provide practice in specific phonetic elements, the teachers reported that a nontrivial proportion of reading was of *materials with a controlled reading level*: 24% of reading materials at kindergarten, 40% at grade 1, and 22% at grade 2. The teachers also reported some reading of material designed to provide practice with specific phonetic elements: 10% of the materials read in kindergarten, 28% at grade 1, and 8% at grade 2.

One traditional way of classifying what students read was telling in this study—the percentage of *easy, instructional-, and frustration-level reading*. In general, the percentage of easy reading decreased with increasing grade level. Although there was relatively little frustration-level reading reported, there also were reported decreases in frustration-level reading with increasing grade. As reports of easy and frustration-level reading decreased with increasing grade, reports of instructional-level reading increased.

The teachers indicated that they used *author studies* (i.e., several pieces by the same author with background information about the author, author's style, and so forth), but for less than half of what is read. Ninety-four percent of the teachers indicated that they tried to teach their students about the illustrators of stories and texts.

Teaching of Writing

Types of writing. Most teachers (86%) reported that their students wrote *stories*, increasingly with advancing grade. Written *responses to readings* also were reported as increasing in frequency with increasing grade level. Eighty-seven percent of the teachers reported *journal writing* by their students, several times a week on average. Students were reported as writing *poems* only a few times a year.

Composition activities were not precluded in kindergarten simply because students lacked translation skills: Kindergarten teachers reported student *dictation of stories* to other people once a month on average. They also reported whole-class dictation of stories to the teacher as scribe occurring about once a month on average. Such dictations were reported as less frequent in grades 1 and 2.

Just as shared reading was reported, so was *shared writing* (see Table 1). A majority of the teachers reported encouraging home reading, and 59% reported they encouraged *home writing*.

Teaching the writing process. Teachers claimed to encourage *planning before writing*, increasing from kindergarten to grade 2. Teaching of *revising* was also reported more often with advancing grade level, for example, through student-teacher and peer editing conferences. All but one kindergarten teacher and five grade-1 teachers reported some *publication* of students' work.

The majority of respondents at each grade reported teaching *mechanics*, for example, punctuation, with such teaching reported more frequently with advancing grade. Most teaching of punctuation was reported as occurring in context, with the percentage of out-of-context instruction of punctuation increasing with advancing grade, however.

A minority (30%) of teachers reported *using the computer* as part of writing instruction.

Efforts Making Literacy and Literacy Instruction Motivating

The teachers reported extensive efforts to make literacy and literacy instruction motivating. In general, the teachers strongly endorsed (i.e., mean rating of at least 5 on a 7-point scale) these practices: (1) classroom as a risk-free environment; (2) positive feedback; (3) conveying the importance of reading/writing in life; (4) setting an exciting mood for reading, adding color and humor, and so on; (5) encouraging an "I can read, I can write" attitude; (6) accepting where the child is right now and working to improve literacy from that point; (7) conveying the goal of every lesson and why the lesson is important to students; (8) encouraging students to find and read stories/books they like as part of the literacy program (i.e., self-selected materials that are read); (9) encouraging students' ownership of their reading by having them make many decisions for themselves about what to read; (10) encouraging personal interpretations of text; (11) selecting materials to be read in class based on students' interest; and (12) encouraging student ownership of writing (e.g., students selecting writing topics).

Accountability

Most teachers (i.e., more than 88%) reported regular *checks of student comprehension* on stories heard and read, asking students questions after most readings and requesting students to retell stories. *Reading portfolios* were reported by 34% of the teachers. *Writing portfolios* were reported by many more teachers, however, and were reported increasingly with advancing grade level. On average the teachers claimed to *communicate with home about student literacy progress* once a month. All but three of the teachers reported *regular conferences with parents* (i.e., at least two a year; see Table 1).

Discussion

The teachers in this study reported an integration of literacy instructional components, many of which enjoy empirical support as improving particular aspects of literacy: It is notable that the teachers reported doing much to create classroom environments supportive of literacy, because placing young children in environments that invite and support literacy stimulates them to do things that are literate (e.g., Morrow, 1990, 1991; Neuman & Roskos, 1990, 1992). The teachers' claimed commitments to outstanding literature are sensible, given the increasing evidence that when such literature drives instruction, there are positive effects on students' autonomous use of literature and attitudes toward reading (e.g., Morrow, 1992; Morrow, O'Connor, & Smith, 1990). The literature emphasis reported by the teachers in this study is also striking in light of increasing evidence (e.g., Feitelson, Kita, & Goldstein, 1986; Morrow, 1992) that consistent experiences with high quality literature foster growth in understanding the structure of stories, which improves both comprehension and writing, as well as the sophistication of children's language. Just as broad reading expands the knowledge of adults (Stanovich & Cunningham, 1993), extensive experiences with stories expand children's knowledge of the world, for example, as reflected by breadth of vocabulary (e.g., Elley, 1989; Robbins & Ehri, 1994).

The claimed attention to the alphabetic principle, development of letter-sound associations, and activities focussing on the sounds of words makes sense given the clear associations between such instruction and success in reading (Adams, 1990) and other competencies, such as spelling (e.g., Ball & Blachman, 1991; Lie, 1991; Nelson, 1990; Tangel & Blachman, 1992; Uhry & Shepherd, 1993). The respondents' reported modeling and explaining of literacy skills and strategies are also sound, for consistent use of these techniques has long-term positive effects on literacy achievement (Duffy et al., 1986, 1987; Duffy, Roehler, & Herrmann, 1988).

That writing was reported as involving instruction to plan, draft, and revise also is sensible: A growing body of data substantiates that children's composing abilities and understanding of writing increase substantially as a function of such instruction (see Graham & Harris, 1994).

Primary-level language arts classrooms vary greatly in the extent to which they motivate children's literacy (e.g., Turner, 1993).

Thus, it is striking that sample teachers reported great commitment to motivation of literacy. Each of the 12 items on the final questionnaire pertaining to motivation of literacy received a mean rating near the top of the scale on which it was rated, with very low variability. That is, this sample of teachers claimed to do much to stimulate their students' engagement in reading and writing, from providing immediate positive feedback to fostering long-term beliefs that students can become good readers and writers.

What is also interesting is what was downplayed. Some common classroom instructional elements that have been criticized as potentially undermining reading achievement (e.g., Allington, 1983; Hiebert, 1983) were reported as infrequent by the sample. For example, little ability-based reading grouping was reported, a practice that probably does not promote student achievement (Slavin, 1987) and can in some cases affect it adversely during the primary years (e.g., Juel, 1990). Also, the survey teachers did not report round-robin reading as the predominant type of reading but rather claimed a variety of types of reading, consistent with the perspective that different types of classroom reading stimulate improvements in different abilities (e.g., Freppon, 1991; Hoffman, 1987; Reutzel, Hollingsworth, & Eldredge, 1994).

In short, a number of contemporary reading instructional theorists have argued for balanced reading instruction, meaning the meshing of holistic literacy experiences and skills instruction (e.g., Adams, 1990; Cazden, 1992; Delpit, 1986; Duffy, 1991; Fisher & Hiebert, 1990; McCaslin, 1989; Pressley, 1994; Stahl et al., 1994). Consistent with that outlook, the teachers in this study depicted their classrooms as integrating the attractive features of whole language with explicit skills. See Groff (1991) for complementary data.

Education of Students Experiencing Difficulties

Although the teachers reported delivering a common curriculum to their students, they also claimed to tailor instruction to individual differences. The teachers' commitment to meeting the needs of individual students came through most clearly with respect to their stance on the literacy education of students experiencing difficulties in learning to read and write. In recent years the literacy instruction offered to weaker readers has been criticized, with observers such as Allington (1991) arguing that weaker readers are often given heavy doses of lower-order, skills-oriented instruction aimed at improving decoding only, with a concomitant reduction in instruction aimed at promoting higher-order meaning making (e.g., Bean, Cooley, Eichelberger, Lazar, & Zigmond, 1991). Such compensatory instruction is often disconnected from the curriculum that stronger students experience.

That is not what this sample of teachers claimed to do for their weaker students, however. Although the teachers reported attending more to lower-order skills with weaker readers compared to good readers, there were few differences in instruction reported for good, average, and weaker readers. The teachers depicted their instruction as providing the more explicit lower-order (i.e., letter- and word-level) instruction that weaker students need without sacrificing weaker students' exposure

to and experiences with good literature, nor their introduction to higher-order skills and strategies. Compensatory instruction for weaker students was described as integrated with the curriculum received by all students. (See Wendler, Samuels, and Moore, 1989, for complementary data that exceptional literacy teachers are especially attuned to providing assistance to students on an as-needed basis.)

Implications for Teacher Education

Based on the data reported here, a case can be made that a teacher's education should include exposure to a number of approaches and practices intermingling different types of instruction. As Duffy (1991) put it:

> I think we do better by teaching teachers multiple alternatives, by teaching them how to network these so they can be accessed appropriately when needed, and by helping them understand that teaching demands fluid, multiple-dimensional responses to an infinite number of classroom situations, not narrow, uni-directional responses . . . . I want [teachers] . . . to select among theories and procedures according to their judgment about what the situation calls for. (pp. 13–14)

Duffy (1991) came to this conclusion following his immersion in an elementary teaching community for a year as he studied teaching and teacher change. His perspective was informed by classroom observations and interviews with teachers. We come to the same conclusion based on information from the participants in the detailed survey summarized here.

Caveats, Potential Limitations, and Future Research

The data obtained in this survey were very orderly. Such orderliness is striking in light of potential criticisms of a survey of instruction conducted at a distance from actual teaching. First, it could be argued that the criteria for selecting teachers would translate differently in different settings. If our selection criteria had been ineffective, what would be expected would be a sample of teachers widely varying in ability and effectiveness. Such a variable sample might be expected to produce highly variable outcomes, which is not what we obtained. A similar criticism could be made that some terms of reference in the survey might have had different meanings for different participants, such as the terms "whole language" and "good, average, and weaker readers." Such a criticism is not consistent, however, with outcomes obtained here. For example, teachers identifying as fully committed to whole language reported that they do not use basals as much as those who were somewhat committed to whole language, an outcome that would be expected. Our use of the terms "good, average, and weaker readers" was not so ambiguous to preclude teachers from reporting more explicit and extensive teaching of lower-order skills to weaker compared to other readers, consistent with many observations in the reading instructional literature (e.g., Harris & Sipay, 1990). In short, although there was certainly some fuzziness in the meanings of some terms in this survey, that ambiguity is because ideas such as whole language and reading-ability classifications are fuzzy con-

cepts. Fuzzy concepts typically can be understood, however, even if precise meanings are elusive (e.g., Mancuso & Eimer, 1982), and we believe the orderliness in outcomes obtained in this study suggests that teachers understood the terms in the survey. We carefully designed the questions to describe practices as the teachers themselves described the practices in response to the first, open-ended questionnaire.

Another potential concern is that by relying on nominations from supervisors who are members of the International Reading Association, the bias would be too much in favor of some literacy perspectives the supervisors perceived to be favored by the Association, in particular, whole language philosophy. Three realities must be confronted in reflecting on this criticism. First, without a doubt, whole language is one of the main conceptions of reading driving primary literacy instruction in North America in the 1990s (see Symons, Woloshyn, & Pressley, 1994); and thus, it is hard to imagine a sampling procedure that would not produce many supervisors or teachers who were not extensively exposed to whole language and frequently committed to some version of it. Second, the members of the International Reading Association are diverse in their outlook. The IRA includes the most prominent proponents of a number of instructional practices and perspectives that conflict with the tenets of whole language. Moreover, publications of the association reflect diversity of perspective about literacy instruction more than unanimity with respect to any one stance, including whole language. Our interaction with professionals working in schools who are members of the association, most of whom are language arts supervisors, indicates that the grass roots members are analogously diverse in their outlooks. Third, the criticism that this study may have been biased toward extremism of any type would have to explain away one of the principle findings, that there was balance in perspective reflected throughout the reports. The teachers in this survey reported integration of diverse practices as part of literacy instruction. Moreover, the teachers claimed many instructional practices not consistent with whole language philosophy, such as isolated skills instruction and, for many, some use of basal readers (e.g., Weaver, 1990).

One strength of the survey approach used here was that the questions on the final instrument were based on teachers' initial responses to the initial survey. That is, all practices probed on the final survey were mentioned in responses to the preliminary survey. A weakness of this approach is that there were other practices that teachers did not cite initially, ones that are common in education but not considered effective by outstanding teachers. For example, in the preliminary round, no teachers cited pull-out remediation instruction as important in their instruction of weaker readers. It seems likely that such instruction occurs in at least some of the classrooms served by the teachers participating in this survey study. We expect that our future final surveys will largely be teacher driven, but that we will also be more proactive in attempting to generate potential teaching elements not identified initially by teachers in order to tap a fuller range of issues about instruction than we did in this survey.

Surveying can provide information about many elements of instruction, but does not provide much insight about teachers' unique implementations of the elements. Might effective teachers be especially talented at story telling, modeling reading and writing processes, communicating with parents, or any of the other elements of instruction? Surveying also does not generate much information about how elements of instruction are blended—either how teachers plan their lessons and hence anticipate mixing elements, or how they make instructional decisions while they teach and thus combine the elements of instruction from minute to minute. Finally, some who remain unconvinced that verbal reports can reflect actual behavior well are reluctant to make inferences about teaching on the basis of teachers' questionnaire responses.

For all of those reasons, we are now observing and interviewing a smaller sample of effective primary literacy teachers. What is reported here is the first of what we hope will be converging data about exceptional primary literacy instruction generated using multiple methods. What the methods across this program of research will have in common, however, will be a focus on effective literacy teachers. We believe that the great debates to come about beginning reading instruction will be better informed than the great debates of the past, if the debaters know a great deal about the teaching of effective literacy teachers.

Author Note. Authors Pressley and Rankin are principal investigators of the NRRC. Additional funding was provided by the State University of New York at Albany (in the form of graduate stipend and tuition for Linda Yokoi) and the University of Nebraska. The opinions in this article are ours and do not represent the views of the funding agencies. Nazy Kaffashan assisted with the data analysis, and Jennifer Mistretta and Ruth Wharton-McDonald commented on the manuscript as it was being prepared, in part as they prepared to conduct follow-up research documenting effective grade-1 literacy instruction more fully. Correspondence regarding this article and the research program in general can be directed to Michael Pressley, Department of Educational Psychology and Statistics, University at Albany, SUNY, Albany, NY 12222.

References

Adams, M. J. (1990). *Beginning to read*. Cambridge, MA: Harvard University Press.

Allington, R. L. (1983). The reading instruction provided readers of differing reading abilities. *Elementary School Journal, 83*, 548-559.

Allington, R. L. (1991). The legacy of "Slow it down and make it more concrete." In J. Zutell & S. McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction: Fortieth yearbook of the National Reading Conference* (pp. 19-29). Chicago: National Reading Conference.

Ball, E. W., & Blachman, B. A. (1991). Does phoneme awareness training in kindergarten make a difference in early word recognition and developmental spelling? *Reading Research Quarterly, 26*, 49-66.

Barr, R. (1984). Beginning reading instruction: From debate to reformation. In P. D. Pearson (Ed.), *Handbook of reading research* (pp. 545-581). New York: Longman.

Bean, R. M., Cooley, W. W., Eichelberger, T., Lazar, M. K., & Zigmond, N. (1991). In class or pullout: Effects of setting on the remedial reading program. *Journal of Reading Behavior, 23*, 445–464.

Bereiter, C., & Bird, M. (1985). Use of thinking aloud in identification and teaching of reading comprehension strategies. *Cognition and Instruction, 2*, 131–156.

Bond, G. L., & Dykstra, R. (1967). The cooperative research program in the first-grade reading instruction. *Reading Research Quarterly, 2*, 5–142.

Brown, A. L., Bransford, J. D., Ferrara, R. A., & Campione, J. C. (1983). Learning, remembering, and understanding. In J. H. Flavell & E. M. Markman (Eds.), *Handbook of child psychology, Vol. III Cognitive development* (pp. 77–166). New York: Wiley.

Brown, R., Pressley, M., Van Meter, P., & Schuder, T. (1995). *A quasi-experimental validation of transactional strategies instruction with previously low-achieving second-grade readers*. (Reading Research Report No. 33). Athens, GA: NRRC, Universities of Georgia and Maryland College Park.

Cazden, C. (1992). *Whole language plus: Essays on literacy in the United States and New Zealand*. New York: Teachers College Press.

Chall, J. S. (1967). *Learning to read: The great debate*. New York: McGraw-Hill.

Chi, M. T. H., Glaser, R., & Farr, M. J. (Eds.). (1988). *The nature of expertise*. Hillsdale, NJ: Erlbaum.

Delpit, L. D. (1986). Skills and other dilemmas of a progressive black educator. *Harvard Educational Review, 56*, 379–385.

Diaper, D. (Ed.). (1989). *Knowledge elicitation: Principles, techniques, and applications*. New York: John Wiley & Sons.

Duffy, G. G. (1991). What counts in teacher education? Dilemmas in educating empowered teachers. In J. Zutell & S. McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction: Fortieth yearbook of the National Reading Conference* (pp. 1–18). Chicago: National Reading Conference.

Duffy, G., Roehler, L., & Herrmann, G. (1988). Modeling mental processes helps poor readers become strategic readers. *Reading Teacher, 41*, 762–767.

Duffy, G. G., Roehler, L. R., Meloth, M., Vavrus, L., Book, C., Putnam, J., & Wesselman, R. (1986). The relationship between explicit verbal explanation during reading skill instruction and student awareness and achievement: A study of reading teacher effects. *Reading Research Quarterly, 21*, 237–252.

Duffy, G. G., Roehler, L. R., Sivan, E., Rackliffe, G., Book, C., Meloth, M., Vavrus, L., Wesselman, R., Putnam, J., & Bassiri, D. (1987). Effects of explaining the reasoning associated with using reading strategies. *Reading Research Quarterly, 22*, 347–368.

Dykstra, R. (1968). Summary of the second-grade phase of the Cooperative Research Program in primary reading instruction. *Reading Research Quarterly, 4*, 49–70.

Elley, W. B. (1989). Vocabulary acquisition from listening to stories. *Reading Research Quarterly, 24*, 174–187.

Ericsson, K. A., & Smith, J. (Eds.). (1991). *Toward a general theory of expertise*. Cambridge: Cambridge University Press.

Feitelson, D., Kita, B., & Goldstein, Z. (1986). Effects of listening to series stories on first graders' comprehension and use of language. *Research in the Teaching of English, 20*, 339–356.

Fisher, C. W., & Hiebert, E. H. (1990). Characteristics of tasks in two approaches to literacy

instruction. *Elementary School Journal, 91*, 3-18.

Flesch, R. (1955). *Why Johnny can't read*. New York: Harper and Row.

Foorman, B. R. (1994). The relevance of a connectionist model of reading for "The great debate." *Educational Psychology Review, 6*, 25-47.

Freppon, P. A. (1991). Children's concepts of the nature and purpose of reading in different instructional settings. *Journal of Reading Behavior, 23*, 139-163.

Goodman, K. S., & Goodman, Y. M. (1979). Learning to read is natural. In L. B. Resnick & P. A. Weaver (Eds.), *Theory and practice of early reading* (Vol. 1, pp. 137-154). Hillsdale, NJ: Erlbaum.

Goodman, Y. M. (Ed.). (1990). *How children construct literacy: Piagetian perspectives*. Newark, DE: International Reading Association.

Graham, S. & Harris, K. R. (1994). The effects of whole language on children's writing: A review of literature. *Educational Psychologist, 29*, 187-192.

Groff, P. (1991). Teachers' opinions of the whole language approach to reading instruction. *Annals of Dyslexia, 41*, 83-95.

Guthrie, J. T., & Tyler, S. J. (1978). Cognition and instruction of poor readers. *Journal of Reading Behavior, 10*, 57-78.

Harris, A. J., & Sipay, E. R. (1990). *How to increase reading ability: A guide to developmental and remedial methods*. New York: Longman.

Hiebert, E. H. (1983). An examination of ability grouping for reading instruction. *Reading Research Quarterly, 18*, 231-255.

Hoffman, J. V. (1987). Rethinking the role of oral reading in basal instruction. *Elementary School Journal, 87*, 367-373.

Hoffmann, R. R. (1992). *The psychology of expertise: Cognitive research and empirical AI*. New York: Springer-Verlag.

Juel, C. (1990). Effects of reading group assignment on reading development in first and second grade. *Journal of Reading Behavior, 22*, 233-254.

King, D. F., & Goodman, K. S. (1990). Whole language: Cherishing learners and their language. *Language, Speech, and Hearing Services in Schools, 21*, 221-227.

Lie, A. (1991). Effects of a training program for stimulating skills in word analysis in first-grade children. *Reading Research Quarterly, 26*, 234-250.

Mancuso, J. C., & Eimer, B. N. (1982). Fitting things into categories. In J. C. Mancuso & J. R. Adams-Webber (Eds.), *The construing person* (pp. 130-151). New York: Praeger.

Mather, N. (1992). Whole language reading instruction for students with learning disabilities: Caught in the cross fire. *Learning Disabilities Research & Practice, 7*, 87-95.

McCaslin, M. M. (1989). Whole language: Theory, instruction, and future implementation. *Elementary School Journal*, 90, 223-229.

Meyer, M., & Booker, J. (1991). *Eliciting and analyzing expert judgement: A practical tour*. London: Academic Press.

Morrow, L. M. (1990). Preparing the classroom environment to promote literacy during play. *Early Childhood Research Quarterly, 5*, 537-554.

Morrow, L. M. (1991). Relationships among physical designs of play centers, teachers' emphasis on literacy in play, and children's literacy behaviors during play. In J. Zutell & S. McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction: Fortieth yearbook of the National Reading Conference* (pp. 127-140). Chicago: National Reading Conference.

Morrow, L. M. (1992). The impact of a literature-based program on literacy achievement, use of

literature, and attitudes of children from minority backgrounds. *Reading Research Quarterly, 27*, 251–275.

Morrow, L. M., O'Connor, E. M., & Smith, J. K. (1990). Effects of a story reading program on the literacy development of at-risk kindergarten children. *Journal of Reading Behavior, 22*, 255–275.

Nelson, L. (1990). The influence of phonics instruction on spelling progress. In J. Zutell & S. McCormick (Eds.), *Literacy theory and research: Analyses from multiple paradigms* (pp. 241–247). Chicago: National Reading Conference.

Neuman, S. B., & Roskos, K. (1990). The influence of literacy-enriched play settings on preschoolers' engagement with written language. In J. Zutell & S. McCormick (Eds.), *Literacy theory and research: Analyses from multiple paradigms* (pp. 179–188). Chicago: National Reading Conference.

Neuman, S. B., & Roskos, K. (1992). Literacy objects as cultural tools: Effects on children's literacy behaviors in play. Reading Research Quarterly, *27*, 203–225.

Ohanian, S. (1994). "Call me teacher" and "Who the hell are you?" In C. B. Smith (Moderator), *Whole language: The debate* (pp. 1–15, 58–61): Bloomington, IN: EDINFO Press.

Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and monitoring activities. *Cognition and Instruction, 1*, 117–175.

Pflaum, S. W., Walberg, H. J., Karegianes, M. L., & Rasher, S. P. (1980). Reading instruction: A quantitative analysis. *Educational Researcher, 9*(7), 12–18.

Pressley, M. (1994). Commentary on the ERIC whole language debate. In C. B. Smith (Moderator), *Whole language: The debate* (pp. 155–178). Bloomington, IN: ERIC/REC.

Pressley, M., El-Dinary, P. B., Gaskins, I., Schuder, T., Bergman, J., Almasi, L., & Brown, R. (1992). Beyond direct explanation: Transactional instruction of reading comprehension strategies. *Elementary School Journal, 92*, 511–554.

Pressley, M., Gaskins, I. W., Cunicelli, E. A., Burdick, N. J., Schaub-Matt, M., Lee, D. S., & Powell, N. (1991). Strategy instruction at Benchmark School: A faculty interview study. *Learning Disability Quarterly, 14*, 19–48.

Pressley, M., & Rankin, J. (1994). More about whole language methods of reading instruction for students at risk for early reading failure. *Learning Disabilities Research & Practice, 9*, 156–167.

Reutzel, D. R., Hollingsworth, P. M., & Eldredge, J. L. (1994). Oral reading instruction: The development on student reading development. *Reading Research Quarterly, 29*, 40–59.

Robbins, C., & Ehri, L. C. (1994). Reading storybooks to kindergartners helps them learn new vocabulary words. *Journal of Educational Psychology, 86*, 54–64.

Scott, A. C., Clayton, J. E., & Gibson, E. L. (1991). *A practical guide to knowledge acquisition*. Reading MA: Addison-Wesley.

Shannon, P. (1994). "The answer is yes . . ." and "People who lives in glass houses . . ." In C. B. Smith (Moderator), *Whole language: The debate* (pp. 48–51, 81–99): Bloomington, IN: EDINFO Press.

Slavin, R. E. (1987). Grouping for instruction in the elementary school. *Educational Psychologist, 22*, 109–128.

Smith, C. B. (Moderator). (1994). *Whole language: The debate*. Bloomington, IN: EDINFO Press.

Stahl, S. A., McKenna, M. C., & Pagnucco, J. R. (1994). The effects of whole language instruction: An update and reappraisal. *Educational Psychologist, 29*, 175–186.

Stahl, S. A., & Miller, P. D. (1989). Whole language and language experience approaches for beginning reading: A quantitative research synthesis. *Review of Educational Research, 59*, 87–116.

Stanovich, K. E., & Cunningham, A. E. (1993). Where does knowledge come from? Specific associations between print exposure and information acquisition. *Journal of Educational Psychology, 85*, 211–229.

Symons, S., Woloshyn, V. E., & Pressley, M. (Guest Eds.). (1994). Scientific evaluation of whole language. [Special issue]. *Educational Psychologist, 29*(4).

Tangel, D. M., & Blachman, B. A. (1992). Effect of phoneme awareness instruction on kindergarten children's invented spelling. *Journal of Reading Behavior, 24*, 233–261.

Turner, J. C. (1993). Situated motivation in literacy instruction. *Reading Research Quarterly, 28*, 288–290.

Uhry, J. K., & Shepherd, M. J. (1993). Segmentation/spelling instruction as part of a first-grade reading program: Effects on several measures of reading. *Reading Research Quarterly, 28*, 218–233.

Weaver, C. (1990). *Understanding whole language: From principles to practice*. Portsmouth, NH: Heinemann.

Wendler, D., Samuels, S. J., & Moore, V. K. (1989). Comprehension instruction of award-winning teachers, teachers with master's degrees, and other teachers. *Reading Research Quarterly, 24*, 382–401.

Whitmore, K. F., & Goodman, Y. M. (1992). Inside the whole language classroom. *School Administrator, 49*(5), 20–26.

NRRC National Reading Research Center

318 Aderhold, University of Georgia, Athens, Georgia 30602-7125
3216 J. M. Patterson Building, University of Maryland, College Park, MD 20742